AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A sample target comprising, as a sample support surface, a surface which is used to support a sample in ionizing the sample on the basis of laser irradiation so as to perform mass spectrometry and which has a finely bumpy structure whose interval between concave portions or convex portions ranges from 1nm to 10μm, wherein

a face of the sample support surface is coated with metal.

2. (Original) The sample target as set forth in claim 1, wherein the metal is at least either platinum (Pt) or gold (Au).

3. (Previously Presented) The sample target as set forth in claim 1, wherein the bumpy structure of the sample support surface is arranged so that a plurality of concave portions are regularly formed.

4. (Original) A sample target comprising, as a sample support surface, a surface which is used to support a sample in ionizing the sample on the basis of laser irradiation so as to perform mass spectrometry and which has a finely bumpy structure of not less than 1nm and less than 1 μm, wherein

the bumpy structure of the sample support surface is arranged so that a plurality of concave portions are regularly formed.

5. (Previously Presented) The sample target as set forth in claim 3, wherein an interval of the concave portions adjacent to each other is not less than 10nm and less than 1μm.

6. (Previously Presented) The sample target as set forth in claim 3, wherein a width of each of the concave portions is not less than 10nm and less than 1µm.

7. (Previously Presented) The sample target as set forth in claim 3, wherein a depth of each of the concave portions is not less than 10nm and less than 1µm.

8. (Previously Presented) The sample target as set forth in claim 3, wherein each of the concave portions is a trench or a hole.

9. (Original) The sample target as set forth in claim 8, wherein: when each of the concave portions is a trench, the concave portions are repeatedly disposed so that trenches in different directions intersect with each other.

10. (Original) The sample target as set forth in claim 8, wherein: when each of the concave portions is a hole, the hole has a cylindrical shape or a prismatic shape.

11. (Previously Presented) The sample target as set forth in claim 1, wherein a material of at least the sample support surface of the sample target is a semiconductor.

12. (Original) The sample target as set forth in claim 11, wherein the semiconductor is silicon.

13. (Original) A method for producing a sample target including, as a sample support surface, a surface which is used to support a sample in ionizing the sample on the basis of laser irradiation so as to perform mass spectrometry and which has a finely bumpy structure whose interval between concave portions or convex portions ranges from 1nm to 10µm,

said method comprising the step of coating a face of the sample support surface with metal.

14. (Original) The method as set forth in claim 13, comprising the step of repeatedly forming finely bumpy structures each of which has concave portions or convex portions on a surface of a substrate in accordance with lithography so that an interval of the concave portions or the convex portions ranges from 1nm to 10μm and a depth of each of the concave portions ranges from 10nm to 1μm, before performing the step of coating the face of the sample support surface with the metal, so as to form the sample support surface on the surface of the substrate.

15. (Original) A method for producing a sample target including, as a sample support surface, a surface which is used to support a sample in ionizing the sample on the basis of laser irradiation so as to perform mass spectrometry and which has a finely bumpy structure of not less than 1nm and less than 1μm,

said method comprising the step of repeatedly disposing concave portions on a surface of a substrate in accordance with lithography so that an interval of the concave portions is not less than 1nm and less than 1μm and a width of each of the concave portions is not less than 10nm and less than 1μm, so as to form the sample support surface on the surface of the substrate.

16. (Previously Presented) The method as set forth in claim 14, wherein the concave portions are formed by using an electron beam drawing apparatus as the lithography.

17. (Previously Presented) A mass spectrometer comprising the sample target as set forth in claim 1.

18. (Original) The mass spectrometer as set forth in claim 17, wherein the mass spectrometer is a laser desorption ionization mass spectrometer which ionizes the sample

to be measured by irradiating laser to the sample so as to measure a molecular weight of the sample.

19. (Previously Presented) The sample target as set forth in claim 1, allowing ionization of the sample without using any matrix.